EXHIBIT A

Cottaneva Creek Watershed Restoration Implementation Project, Phase II Statement of Work

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Trout Unlimited will:

- 1. Improve spawning and rearing habitat by reducing fine sediment delivery for coho salmon and steelhead trout in a selected section of South Fork Cottaneva Creek tributary to Cottaneva Creek in Mendocino County. The objective is to save 11,320 cubic yards of sediment from delivery by dispersing road runoff on 4.47 miles of road, reestablishing drainage patterns at 14 stream crossings and removing or stabilizing sediment from five sites along the alignment.
- 2. Conduct work on the South Fork Cottoneva Creek Watershed. The project is located in Township 022N, Range 18W, Section 24, and Township 022N, Range 17W, Sections 17, 18, 19, and 20 of the Hales Grove and Westport 7.5 Minute U.S.G.S. Quadrangles, 39.739° N latitude, -123.815° W longitude as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.
- 3. Decommission 1.54 miles of road. Fill slope and stream crossing fill from approximately 8 stream crossings and 4 slide sites will be excavated and stored in stable locations. The following treatments will be implemented where appropriate:
 - Excavation of in-place stream crossings at locations where roads or landings were built across stream channels. This includes complete excavation of the fill, including the culvert or Humboldt log crossing so the original stream bed and side slopes are exhumed. A stream crossing excavation includes removing the culvert and the underlying and the adjacent fill material. Complete excavation of stream crossing fills, includes 100 year flood channel bottom widths and 2:1 or otherwise stable side slopes. When possible the excavated spoil will be stored at nearby stable locations where it will not erode. If there is a limited amount of stable storage locations at the excavation site the crossing fill material will be hauled off-site for storage.
 - Road surface treatments: 1) ripping of the surface of the road or landing using mechanical rippers to reduce surface runoff and improve revegetation; 2) in-place outsloping or the excavation of unstable side cast material that could fail and deliver sediment to a stream along the outside edge of a road prism or landing and the replacement of the spoil on the roadbed against the corresponding adjacent cutbank, or in close proximity of the site; 3) exported out-sloping which involves not placing the material against the cutbank so the material is end hauled to a spoil disposal site; 4) installation of cross drains or deep water bars at 50, 75, 100 or 200 foot intervals or as necessary at springs and seeps to disperse road surface runoff. The cross road drains provide road surface drainage and prevent the collection of concentrated runoff on the former roadbed.

Upgrade 2.93 miles of road. The following road upgrading treatments will be implemented where appropriate:

- Installation of culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment;
- Installation of critical dips to eliminate diversion potential;
- Installation of rock armored fill crossings or fords;
- Excavation and/or armoring of inboard ditches;
- Excavation of culvert inlets;
- Installation of downspouts and/or rock dissipation at culvert outlets;
- Construction of rock armored fords;
- Installation of rolling dips;
- Reshaping of road surfaces;
- Removal of berms;
- Installation of ditch relief culverts;
- rocking of road surfaces.

Seeding and mulching of all exposed soils which may deliver sediment to a stream. Woody debris will be concentrated on finished slopes adjacent to stream crossings. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.

- 4. All stream crossings will meet flow carrying capacity required for a 100 year flood event as identified by specifications determined by NOAA Fisheries and the California Department of Fish and Game.
- 5. All crossing upgrades in fish bearing reaches of streams will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for adult and juvenile salmonid fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*. Culvert replacement or modification designs shall be visually reviewed and authorized by NOAA Fisheries (or DFG) engineers prior to commencement of work.
- 6. The landowner must maintain road upgrading projects for a minimum of 10 years.
- 7. Sites which are expected to erode and deliver sediment to the stream are the only locations where work will be authorized for reimbursement under the terms of this agreement. Reimbursement will not be authorized for work done to improve aesthetics only.
- 8. Notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of

salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

- Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, *Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act*, June 2000.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
- 9. All road upgrading and decommissioning will be done in accordance with techniques described in the *Handbook for Forest and Ranch Roads*, (PWA, 1994c.) and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part X, January 2004. All road decommissioning and upgrade sites and techniques shall be approved by the Grant Manager before any equipment work takes place.
- 10. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.
- 11. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.
- 12. An annual report will be submitted each year, no later than November 15, detailing the work completed that field season. The annual report will include, but no necessarily be limited to the following where applicable:
 - Construction start and end dates
 - Percentage of the project completed in total to date
 - Dewatering and fish relocation data on DFG data sheet (to be provided by the DFG Grant Manager upon request)
 - Construction start and end dates for work to be implemented the following season

The annual report will also include on a site by site basis

• Road length segment decommissioned per road segment

- Sediment spoils volume estimate per road segment
- Upslope stream crossings decommissioned (not for fish passage)
- Sediment volume prevented from entering the stream per crossing
- Sediment spoils volume estimate per crossing
- Upslope area treated (sq ft) (landslides, bank stabilization)
- 13. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, *Microsoft Word* compatible, copy on CD. If the project is not completed in the current year, the Grantee will submit a summary of the completed portion no later than December 1 and again each year until completed. The report shall include, but not necessarily be limited to the following information:
 - Grant number
 - Project name
 - Geographic area (e.g., watershed name)
 - Location of work show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
 - Geospatial reference/location (lat/long is preferred defined as point, line, or polygon)
 - Project start and end dates and the number of person hours expended
 - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
 - Expected benefits to anadromous salmonids from the project
 - Labeled before and after photographs of restoration activities and techniques
 - A description and analysis of the restoration and planning techniques used
 - A description of the results of the project
 - Specific project access using public and private roads and trails, with landowner name and address
 - Complete as built project description
 - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– **Reporting Metrics** (HU) (Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
 - o Design spec achieved
 - Fish movement/abundance

• Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Total acres of upslope area treated.
- Total miles of road treated.
- Miles of road treated for road drainage system improvements.
- Miles of road decommissioned.
- Number of cubic yards of sediment saved from entering the stream.

Fish Passage Improvement Projects (HB):

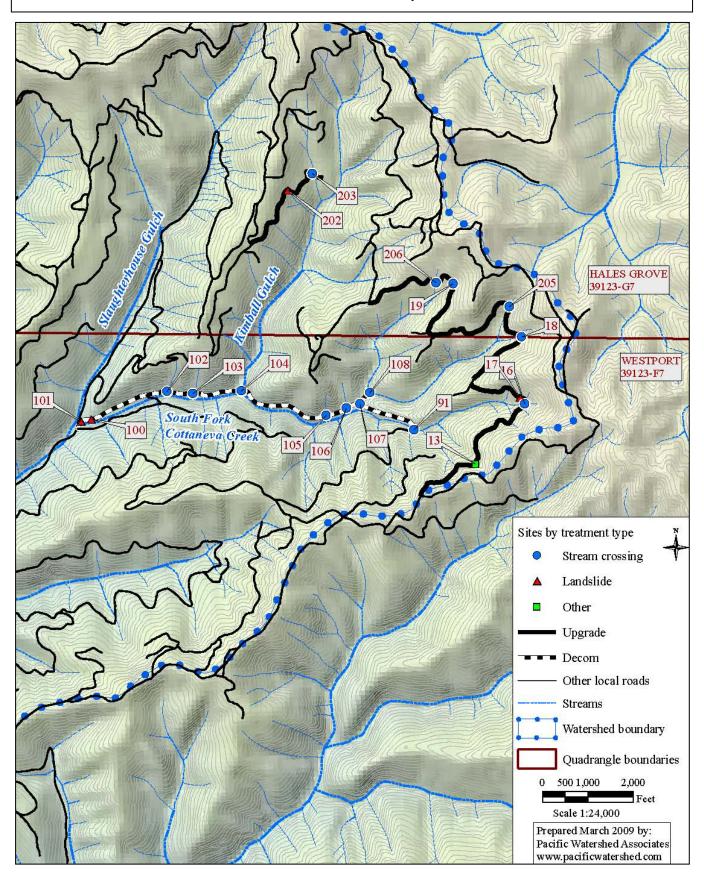
- Miles of stream treated.
- Types of crossings treated, select from: culvert, bridge or ford.
- Miles of stream made more accessible by treating stream crossings.
- Number of road crossings removed.
- Number of barriers other than culverts treated for fish passage.
- Miles of stream made more accessible by removing barriers other than culverts.

Riparian Habitat Projects (HR, HS)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.
- 14. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Cottaneva Creek Watershed Restoration Implementation Project, Phase II.

Exhibit C Cottoneva Creek Watershed Restoration Implementation Project, Phase II Project Location Map

T022N, R18W S24; T022N, R17W, S17, 18, 19, & 20; Hales Grove and Westport Quads Mendocino County



	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Blasdale's bent grass Agrostis blasdalei	PMPOA04060			G2	\$2.2	1B.2
2	California floater Anodonta californiensis	IMBIV04020			G3Q	S2?	
3	Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
4	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
5	Cooper's hawk Accipiter cooperii	ABNKC12040			G5	S3	
6	Fen	CTT51200CA			G2	S1.2	
7	Grand Fir Forest	CTT82120CA			G1	S1.1	
8	Howell's spineflower Chorizanthe howellii	PDPGN040C0	Endangered	Threatened	G1	S1.2	1B.2
9	Humboldt milk-vetch Astragalus agnicidus	PDFAB0F080		Endangered	G2	S2.1	1B.1
10	Kellogg's buckwheat Eriogonum kelloggii	PDPGN083A0	Candidate	Endangered	G1	S1.2	1B.2
11	Lyngbye's sedge Carex lyngbyei	PMCYP037Y0			G5	S2.2	2.2
12	Mcdonald's rock-cress Arabis macdonaldiana	PDBRA06150	Endangered	Endangered	G2	S2.1	1B.1
13	Mendocino Coast paintbrush Castilleja mendocinensis	PDSCR0D3N0			G2	S2.2	1B.2
14	Mendocino gentian Gentiana setigera	PDGEN060S0			G2	S1	1B.2
15	Menzies' wallflower Erysimum menziesii ssp. menziesii	PDBRA160E1	Endangered	Endangered	G3?T2	S2.1	1B.1
16	North Central Coast Fall-Run Steelhead Stream	CARA2631CA			G?	SNR	
17	North Coast phacelia Phacelia insularis var. continentis	PDHYD0C2B1			G2T1	S1.2	1B.2
18	Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
19	Northern Interior Cypress Forest	CTT83220CA			G2	S2.2	
20	Oregon coast paintbrush Castilleja affinis ssp. litoralis	PDSCR0D012			G4G5T4	S2.2	2.2
21	Oregon goldthread Coptis laciniata	PDRAN0A020			G4G5	\$2.2	2.2
22	Pacific gilia Gilia capitata ssp. pacifica	PDPLM040B6			G5T3T4	\$2.2?	1B.2
23	Pacific tailed frog Ascaphus truei	AAABA01010			G4	S2S3	SC
24	Point Reyes horkelia Horkelia marinensis	PDROS0W0B0			G2	\$2.2	1B.2
25	Raiche's manzanita Arctostaphylos stanfordiana ssp. raichei	PDERI041G2			G3T2?	S2?	1B.1
26	Red Mountain catchfly Silene campanulata ssp. campanulata	PDCAR0U0A2		Endangered	G5T3Q	S3.2	4.2

723498 Cottaneva Creek Watershed Restoration Implementation Project, Phase II

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
27	Red Mountain stonecrop Sedum eastwoodiae	PDCRA0A1S0	Candidate		G1	S1.2	1B.2
28	Sonoma canescent manzanita Arctostaphylos canescens ssp. sonomensis	PDERI04066			G3G4T2	S2.1	1B.2
29	Sonoma tree vole Arborimus pomo	AMAFF23030			G3	S3	SC
30	Ten Mile shoulderband Noyo intersessa	IMGASC5070			G2	S2	
31	Thurber's reed grass Calamagrostis crassiglumis	PMPOA17070			G3Q	\$1.2	2.1
32	Upland Douglas Fir Forest	CTT82420CA			G4	S3.1	
33	Whitney's farewell-to-spring Clarkia amoena ssp. whitneyi	PDONA05025			G5T2	S2.1	1B.1
34	Wolf's evening-primrose Oenothera wolfii	PDONA0C1K0			G1	S1.1	1B.1
35	coast fawn lily Erythronium revolutum	PMLIL0U0F0			G4	S3	2.2
36	coast lily Lilium maritimum	PMLIL1A0C0			G2	S2	1B.1
37	coastal triquetrella Triquetrella californica	NBMUS7S010			G1	\$1.2	1B.2
38	coho salmon - central California coast ESU Oncorhynchus kisutch	AFCHA02034	Endangered	Endangered	G4	S2?	
39	dark-eyed gilia Gilia millefoliata	PDPLM04130			G2	\$2.2	1B.2
40	deceiving sedge Carex saliniformis	PMCYP03BY0			G2	\$2.2	1B.2
41	foothill yellow-legged frog Rana boylii	AAABH01050			G3	S2S3	SC
42	globose dune beetle Coelus globosus	IICOL4A010			G1	S1	
43	green yellow sedge Carex viridula var. viridula	PMCYP03EM3			G5T5	S1.3	2.3
44	hoary bat Lasiurus cinereus	AMACC05030			G5	S4?	
45	leafy reed grass Calamagrostis foliosa	PMPOA170C0		Rare	G3	S3.2	4.2
46	leafy-stemmed mitrewort Mitella caulescens	PDSAX0N020			G5	S4.2	4.2
47	long-beard lichen Usnea longissima	NLLEC5P420			G4	S4.2	
48	maple-leaved checkerbloom Sidalcea malachroides	PDMAL110E0			G3G4	S3S4.2	4.2
49	northern goshawk Accipiter gentilis	ABNKC12060			G5	S 3	SC

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
50	northern red-legged frog Rana aurora	AAABH01021			G4T4	S2?	SC
51	northern spotted owl Strix occidentalis caurina	ABNSB12011	Threatened		G3T3	S2S3	SC
52	oval-leaved viburnum Viburnum ellipticum	PDCPR07080			G5	S2.3	2.3
53	pink sand-verbena Abronia umbellata ssp. breviflora	PDNYC010N2			G4G5T2	S2.1	1B.1
54	purple martin Progne subis	ABPAU01010			G5	S3	SC
55	purple-stemmed checkerbloom Sidalcea malviflora ssp. purpurea	PDMAL110FL			G5T2	S2.2	1B.2
56	robust false lupine Thermopsis robusta	PDFAB3Z0D0			G2Q	S2.2	1B.2
57	robust monardella Monardella villosa ssp. globosa	PDLAM180P7			G5T2	S2.2	1B.2
58	round-headed Chinese-houses Collinsia corymbosa	PDSCR0H060			G1	S1.2	1B.2
59	short-leaved evax Hesperevax sparsiflora var. brevifolia	PDASTE5011			G4T2T3	S2S3	1B.2
60	southern torrent salamander Rhyacotriton variegatus	AAAAJ01020			G3G4	S2S3	SC
61	summer-run steelhead trout Oncorhynchus mykiss irideus	AFCHA0213B			G5T4Q	S2	SC
62	swamp harebell Campanula californica	PDCAM02060			G3	S3	1B.2
63	tidewater goby Eucyclogobius newberryi	AFCQN04010	Endangered		G3	S2S3	SC
64	western pearlshell Margaritifera falcata	IMBIV27020			G4	S2S3?	
65	western snowy plover Charadrius alexandrinus nivosus	ABNNB03031	Threatened		G4T3	S2	SC
66	white beaked-rush Rhynchospora alba	PMCYP0N010			G5	S3.2	2.2
67	white-flowered rein orchid Piperia candida	PMORC1X050			G3	S3.2	1B.2

EXHIBIT A

Forsythe Creek Sediment Reduction Project Statement of Work

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

- 1. Reduce sediment contributions to the Forsythe Creek a tributary to the West Fork of the Russian River by implementing 12 miles of road upgrades and erosion-control measures within the Forsythe Creek watershed.
- 2. Work will be conducted in the upland area of the Forsythe Creek watershed, which includes the Walker Creek and Mill Creek subwatersheds and is part of the Russian River Basin. The project sites are located in Township 17N, Range 13W, of the Laughlin Range 7.5 Minute U.S.G.S. Quadrangle, as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.
- 3. The following includes all road drainage upgrades, decommissioning and any road to trail conversion treatments for this project:
- Construct at least 19 critical dips to prevent possible diversions at streams with diversion potential,
- Install 21 culverts where they are currently absent,
- Replace 15 undersized culverts,
- Construct 13 armored fill crossings that will require 345 cubic yards of riprap,
- Excavate soil likely to deliver to the stream at 10 sites,
- Remove 3 crossings to prevent channel gullying,
- Install 1 trash rack at a crossing to help prevent plugging,
- Install 1 downspout to prevent erosion at a culvert outlet,
- At 13 sites add a total of 290 cubic yards of rock armor on outboard stream crossing fill slopes.
- At 20 sites add a total of 119 cubic yards of rock armor to protect ditches,
- At 3 sites add a total of 60 cubic yards of rock to armor headcuts,

Road Segment Treatments:

- Clean or cut 890 feet of ditch at 5 sites,
- Clean 15 existing culverts plugged with debris,
- Install 26 rolling dips to disperse road surface drainage,
- Install 20 ditch relief culverts and replace 6 ditch relief culverts,
- Surface the road at 3 sites using 50 cubic yards of rock,
- Remove 2,910 feet of berm and outslope the road surface at 29 sites,
- Install miscellaneous treatments at 8 additional sites.

- 4. The following treatments will be implemented where appropriate:
 - Upgrading stream crossings installing culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment; eliminate diversion potential by installing a critical dip; replacing culverted fills with hardened fords or armored fills, etc
 - Excavation of unstable fill slopes or potentially unstable sidecast materials that could otherwise fail and deliver sediment to a stream
 - Dispersion of road runoff and disconnecting road surface runoff from streams, including but not limited to, berm removal, road surface shaping and installation of ditch relief culverts
 - Seed and mulch all exposed soils which may deliver sediment to a stream.
 The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years
- 5. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.
- 6. The Grantee shall notify the DFG Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
 - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
 - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
 - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
 - The Grantee will provide fish relocation data to the DFG Grant Manager on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
 - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.
 - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.

- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration* Manual.
- 7. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the California Salmonid Stream Habitat Restoration Manual, Flosi et al. and the California Salmonid Stream Restoration Manual, Third Edition, Volume II, Part XI, January 2004.
- 8. Annually and upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, *Microsoft Word* compatible, copy on a CD. If the project is not completed in the current year, the Grantee will submit a summary of the completed portion no later than **November 1** and again each year until completed. The report shall include, but not necessarily be limited to the following information:
 - Grant number
 - Project name
 - Geographic area (e.g., watershed name)
 - Location of work show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
 - Geospatial reference/location (lat/long is preferred defined as point, line, or polygon)
 - Project start and end dates and the number of person hours expended
 - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
 - Expected benefits to anadromous salmonids from the project
 - Labeled before and after photographs of any restoration activities and techniques
 - Specific project access using public and private roads and trails, with landowner name and address
 - Complete as built road log including sediment savings per site
 - Report measurable metrics for the project by responding to the restoration project metrics listed below.

 $\label{eq:habitat Protection and Restoration Projects-Reporting Metrics (HI, HR, HS)} \\ (Report N/A \ to \ those \ that \ do \ not \ apply)$

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project

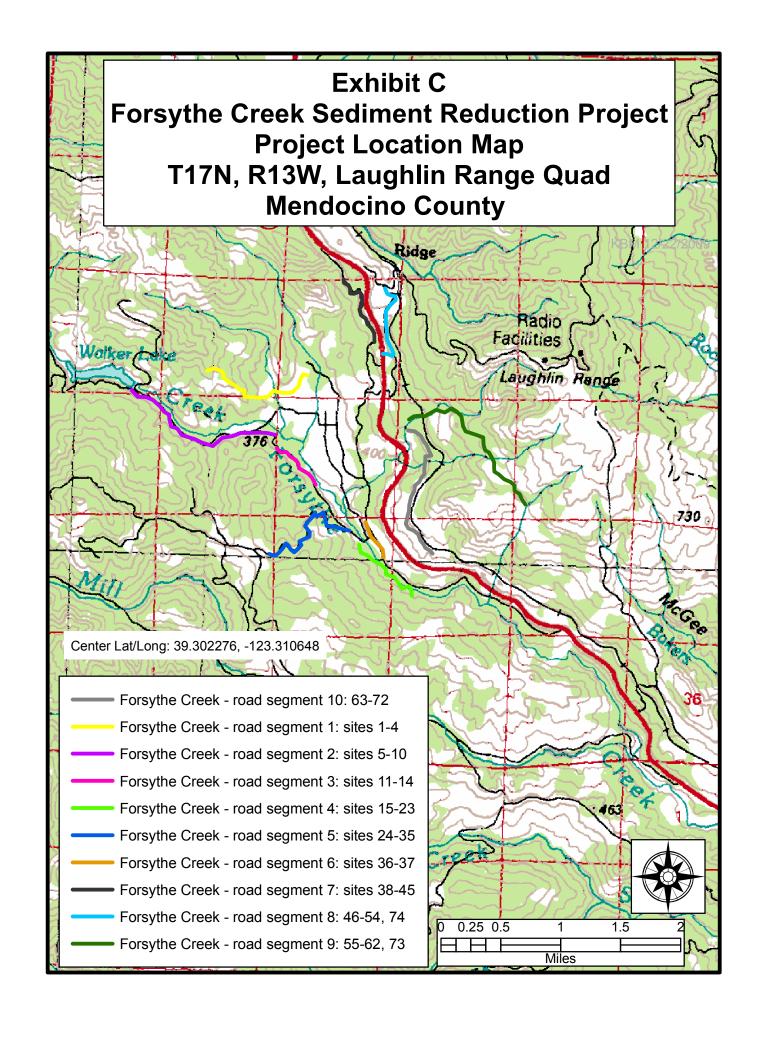
- o Design spec achieved
- o Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Number of acres treated.
- Number of miles of road decommissioned or upgraded (e.g., treated).
- Number of cubic yards of sediment saved from entering the steam per site.

Water Quality Projects

- Water quality limitations addressed by the project (e.g. 303(d), TMDL)
- 9. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the *Forsythe Creek Sediment Reduction Project*.



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723499_186_HU_Forsythe Creek Sediment Reduction Project
T17N, R13W, S28

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
Pacific fisher Martes pennanti (pacifica) DPS	AMAJF01021	Candidate	unknown code	G5	S2S3	SC
2 deep-scarred cryptantha Cryptantha excavata	PDBOR0A0W0			G2	S2.3	1B.3
3 foothill yellow-legged frog Rana boylii	AAABH01050			G3	S2S3	SC
4 glandular western flax Hesperolinon adenophyllum	PDLIN01010			G2	S2.3	1B.2
5 northern spotted owl Strix occidentalis caurina	ABNSB12011	Threatened		G3T3	S2S3	SC